



## ISMSM/NIST Research Fellow

The *Institute for Soft Matter Synthesis and Metrology* at Georgetown University (GU), in collaboration with the National Institute of Standards and Technology (NIST), invite applications for an independent **Research Fellow** to work closely with scientists at Georgetown and NIST on soft matter, broadly defined.

### 1. Fellowship Details

- This position is suitable for excellent scientists with a PhD in physics, chemistry, materials science, chemical engineering, mechanical engineering, biophysics, applied mathematics, or related disciplines, and a strong record of accomplishments in experiment, synthesis, metrology, theory, or simulation.
- In our soft matter community, scientific excellence goes together with the quality of the human experience. We seek a diverse pool of applicants sharing our excitement of scientific discoveries, enthusiasm to learn from each other and desire to grow by exchanging perspectives.
- The Fellowship is for two years, with an option for a third year depending on mutual interest. Each Fellow will have competitive salary and access to \$5,000/year travel expenses, and up to \$10,000/year research expenses; as well as access to a wide range of synthesis and characterization equipment at Georgetown and NIST.
- Fellows are expected to work in areas that overlap strongly with 2 or more groups at Georgetown, as well as with NIST scientists.
- Current research areas (experiment, theory, synthesis, metrology, simulations) include (but are not limited to):

Theory of polymer glasses	Gels and networks	Rheology and structure of spherical and rodlike suspensions	Additive manufacturing and 3D printing of soft matter	Phase separation in biology
Active matter	Rheology and structure of cement	Amorphous solids	Biopolymer networks	Self-assembly at interfaces
Lipid bilayer membrane theory and simulation	Motion of giardia and microorganisms	Shear banding in fluids and amorphous solids	Design of polymer nanoparticles	Polymer-based fibrils for medical applications
Self-assembly mediated by intrinsically-disordered proteins	Dynamics of entangled polymers	Synthesis of multifunctional polymer networks	Simulation of complex aromatic molecular assemblies	Novel metrologies for imaging and mechanics of soft matter.

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- The ISMSM has extensive laboratory facilities, and access to cloud computing networks. NIST can be easily reached by public transport or driving from GU.
- See <http://softmatter.georgetown.edu> for information about the ISMSM. Information about soft matter scientists at NIST can be found at <https://www.nist.gov>. Much of our interaction is with the Materials Measurement Laboratory <https://www.nist.gov/mml> or the NIST Center for Neutron Research <https://www.nist.gov/ncnr>.

### 2. Application Process:

- The first stage of the application consists of the following:
  1. CV
  2. Full publication list.
  3. One page summary of the candidate's research achievements.
  4. One page letter of intent outlining the research ideas that the candidate would like to pursue, and explaining how they would integrate with the research at ISMSM.
  5. 3 reference letters

### All documents should be sent as PDF files

- The second stage of the application is by invitation and requires:
  1. A research proposal, including research plan, anticipated budget, and clear statement of potential collaboration(s) with GU and NIST scientists. No longer than 5 pages (not including references), typeset at 11 point with 1 inch margins.
  2. One letter of support from GU scientist(s) with whom the candidate plans to collaborate.

For further questions and information please contact any ISM member or

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**Applications can be submitted through *Academic Jobs Online*:**  
<https://academicjobsonline.org/ajo/jobs/22818>

### 3. Deadline and dates:

- Deadline for the letter of intent: 20<sup>th</sup> October 2022
- Invitation to submit the research proposal: 20<sup>st</sup> November 2022
- Research proposal deadline: 6<sup>th</sup> January 2023
- Earliest starting date: 1<sup>st</sup> March 2023

## **ISMSM Research Fellow**

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*Georgetown University is an Equal Opportunity/Affirmative Action Employer fully dedicated to achieving a diverse team of employees. All qualified applicants are encouraged to apply and will receive consideration for employment without regard to race, color, religion, national origin, age, sex (including pregnancy, gender identity and expression, and sexual orientation), disability status, protected veteran status, or any other characteristic protected by law.*